

(~0.75 in) in height, although, again, these dimensions are merely exemplary, and dimensions can vary widely for different embodiments.

[0501] While the principles of the invention have been described herein, it is to be understood by those skilled in the art that this description is made only by way of example and not as a limitation as to the scope of the invention. Other embodiments are contemplated within the scope of the present invention in addition to the exemplary embodiments shown and described herein. Modifications and substitutions by one of ordinary skill in the art are considered to be within the scope of the present invention.

What is claimed is:

1. A wearable infusion pump assembly comprising:
 - a reservoir assembly having
 - a fluid reservoir; and
 - a fluid path from the reservoir, the fluid path defining a pump area, the pump area having a flexible membrane resiliently deformable into the fluid path;
 - a pump assembly releaseably engageable to the reservoir assembly, the pump assembly having
 - a pump, the pump contacting the pump area when the reservoir assembly and pump assembly are engaged whereby the pump flexes the flexible membrane; and
 - a pump controller for controlling the pump.
2. The wearable infusion pump of claim 1 wherein the reservoir assembly has a rigid body and the fluid path is defined by the flexible membrane and the rigid body opposite the flexible membrane to define the pump area of the fluid channel, and wherein the flexible membrane has a first position where the flexible membrane and body are separated and a second position where the flexible membrane contacts the body, the pump flexing the flexible membrane between the first position and the second position.
3. The wearable infusion pump of claim 1 wherein the pump comprises a pump actuator, an inlet valve and an outlet valve, wherein the inlet valve and outlet valve flex the flexible membrane to substantially close the fluid path.
4. The wearable infusion pump of claim 3 the outlet valve is biased to a first position to substantially close the fluid path and having a second position where the fluid path is substantially open, whereby pressure in the fluid path can move the outlet valve to the second position to open the fluid path.
5. The wearable infusion pump of claim 3 wherein the inlet valve has a first position whereby the fluid path is substantially open, and second position whereby the fluid path is substantially closed, and the pump assembly has an actuation member to move the inlet valve from the first position to the second position.
6. The wearable infusion pump of claim 5 where the actuation member includes a shape memory alloy wire.
7. The wearable infusion pump of claim 3 wherein the flexible membrane is continuous.
8. A wearable infusion pump assembly comprising:
 - a reservoir assembly comprising
 - a reservoir having an infusible fluid;
 - the reservoir assembly defining a fluid path from the reservoir to a cannula, the fluid path having a pump area, the pump area defined by a flexible membrane resiliently deformable into the fluid path,
 - a pump assembly releaseably engageable to the reservoir assembly, the pump assembly comprising

a pump contacting the flexible section when the reservoir assembly and pump assembly are engaged, the pump contacts the pump area whereby the pump flexes the flexible section;

a pump controller for controlling the pump, and
and whereby the reservoir assembly is wetted and the pump assembly is non-wetted.

9. The wearable infusion pump of claim 8 wherein the fluid path is defined by the flexible member and a rigid body opposite the flexible membrane to define the pump area of the fluid channel, and wherein the flexible membrane has a first position where the membrane and body are separated and a second position where the membrane contacts the body, the pump flexing the membrane between the first position and the second position.

10. The wearable infusion pump of claim 8 wherein the pump comprises a pump actuator, an inlet valve actuator and an outlet valve actuator, wherein the inlet valve actuator and outlet valve actuator flex the flexible membrane to substantially close the fluid path.

11. The wearable infusion pump of claim 10 the outlet valve is biased to a first position to substantially close the fluid path and having a second position where the fluid path is substantially open, whereby pressure in the fluid path can move the outlet valve to the second position to open the fluid path.

12. The wearable infusion pump of claim 10 wherein the inlet valve has a first position whereby the fluid path is substantially open, and second position whereby the fluid path is substantially closed, and the pump assembly has an actuation member to move the inlet valve from the first position to the second position.

13. The wearable infusion pump of claim 12 where the actuation member includes a shape memory alloy wire.

14. The wearable infusion pump of claim 10 wherein the flexible membrane is continuous.

15. A wearable infusion pump assembly comprising:

- a reservoir assembly comprising

- a reservoir;
- a body;
- a flexible membrane, the flexible membrane the body defining a fluid path from the reservoir to a cannula, the fluid path having a pump area, the flexible membrane having a first surface for contact with a fluid and an opposite second surface; and

a pump assembly releaseably engageable to the reservoir assembly, the pump assembly comprising

- a pump, the pump contacting the second surface of the flexible membrane when the pump assembly and reservoir assembly are engaged whereby the pump flexes the flexible member;

and a pump control for controlling the pump.

16. The wearable infusion pump of claim 15 wherein the body is rigid, and wherein the flexible membrane has a first position where the membrane and body are separated and a second position where the first surface of the membrane contacts the body, the pump flexing the membrane between the first position and the second position.

17. The wearable infusion pump of claim 15 wherein the pump comprises a pump actuator, an inlet valve and an outlet valve, wherein the inlet valve and outlet valve contact the second surface of the flexible membrane to flex the flexible membrane to substantially close the fluid path.